AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A mobile cellular telecommunications network employing macro-diversity,

wherein a mobile station can establish a plurality of simultaneous radio links with digital cells in the network,

wherein the digital cells of the network are considered in groups, and

wherein, when determining whether to establish a new radio link between a mobile station and a new digital cell, the network applies a quality criterion to the new link, which depends on whether the new digital cell belongs to any group with which the mobile station does not already have a link.

2. (Currently Amended) A mobile cellular telecommunications network as claimed in claim 1,

wherein the network applies a more easily satisfied criterion to the establishment of a new link with a digital cell in one or more groups with which the mobile station already has a link, and a less easily satisfied criterion to the establishment of a new link with a digital cell in a group with which the mobile station currently has no link.

3. (Original) A mobile cellular telecommunications network as claimed in claim 1,

wherein the quality criterion relates to a signal quality level.

4. (Original) A mobile cellular telecommunications network as claimed in claim 1,

wherein the quality criterion relates to a longer time period for which a signal quality level is satisfied.

5. (Original) A mobile cellular telecommunications network as claimed in claim 1,

wherein a plurality of layers of groups can be defined, such that each digital cell may be in one group within each layer.

6. (Currently Amended) A mobile cellular telecommunications network as claimed in claim 5,

wherein digital cells associated with one base station are considered to be in the same group.

7. (Currently Amended) A mobile cellular telecommunications network as claimed in claim 5,

wherein digital cells associated with one radio network controller are considered to be in the same group.

8. (Currently Amended) A mobile cellular telecommunications network as claimed in claim 5,

wherein digital cells associated with a first base station are considered to be in a first group;

wherein digital cells associated with a second base station are considered to be in a second group;

wherein digital cells associated with a first radio network controller are considered to be in a third group; and

wherein digital cells associated with a second radio network controller are considered to be in a fourth group.

9. (Currently Amended) A mobile cellular telecommunications network as claimed in claim 8,

wherein, when determining whether to establish a new radio link between a mobile station and a new cell:

the network applies a first quality criterion to the establishment of a new link with a digital cell associated with a base station with which the mobile station already has a link, and associated with a radio network controller with which the mobile station already has a link;

the network applies a second less easily satisfied criterion to the establishment of a new link with a digital cell associated with a base station with which the mobile station currently has no link; and

the network applies a third still less easily satisfied criterion to the establishment of a new link with a digital cell associated with a radio network controller with which the mobile station currently has no link.

10. (Currently Amended) A mobile cellular telecommunications network as claimed in claim 1,

wherein each mobile station has an active list of digital cells to which it has radio links, and the criteria for establishing a new radio link are set relative to the quality of the radio links to digital cells on the active list.

11. (Original) A mobile cellular telecommunications network as claimed in claim 1, which uses Code Division Multiple Access.

12. (Currently Amended) A method of controlling a cellular telecommunications network using macro-diversity,

wherein a mobile station can establish a plurality of simultaneous radio links with digital cells in the network, and

wherein the digital cells of the network are considered in groups,

the method comprising determining whether to establish a new radio link between a mobile station and a new digital cell by applying a quality criterion to the new link, which depends on whether the new digital cell belongs to any group with which the mobile station does not already have a link.

13. (Currently Amended) A method as claimed in claim 12, comprising applying a more easily satisfied criterion to the establishment of a new link with a digital cell in one or more groups with which the mobile station already has a link, and a less easily satisfied criterion to the establishment of a new link with a digital cell in a group with which the mobile station currently has no link.

14. (Original) A method as claimed in claim 12, wherein the quality criterion relates to a signal quality level.

15. (Original) A method as claimed in claim 12, wherein the quality criterion relates to a longer time period for which a signal quality level is satisfied.

16. (Currently Amended) A method as claimed in claim 12, wherein a plurality of layers of groups can be defined, such that each digital cell may be in one group within each layer.

17. (Currently Amended) A method as claimed in claim 16, wherein digital cells associated with one base station are considered to be in the same group.

18. (Currently Amended) A method as claimed in claim 16, wherein digital cells associated with one radio network controller are considered to be in the same group.

19. (Currently Amended) A method as claimed in claim 16, wherein digital cells associated with a first base station are considered to be in a first group;

wherein digital cells associated with a second base station are considered to be in a second group;

wherein digital cells associated with a first radio network controller are considered to be in a third group; and

wherein digital cells associated with a second radio network controller are considered to be in a fourth group.

20. (Currently Amended) A method as claimed in claim 12, comprising, when determining whether to establish a new radio link between a mobile station and a new cell:

applying a first quality criterion to the establishment of a new link with a digital cell associated with a base station with which the mobile station already has a link, and associated with a radio network controller with which the mobile station already has a link;

applying a second less easily satisfied criterion to the establishment of a new link with a digital cell associated with a base station with which the mobile station currently has no link; and

applying a third still less easily satisfied criterion to the establishment of a new link with a digital cell associated with a radio network controller with which the mobile station currently has no link.

21. (Currently Amended) A method as claimed in claim 12, wherein each mobile station has an active list of digital cells to which it has radio links, and the criteria for establishing a new radio link are set relative to the quality of the radio links to digital cells on the active list.

22. (Original) A method as claimed in claim 12, wherein the network uses Code Division Multiple Access.

23. (Currently Amended) A mobile cellular telecommunications network using macro-diversity,

wherein a mobile station can establish a plurality of simultaneous radio links with digital cells in the network, the digital cells with which the mobile station has established radio links being defined as an active set,

wherein the digital cells of the network are considered in groups, and

wherein the network determines whether to establish a new radio link between a mobile station and a new digital cell, by determining whether a quality value of the new radio link exceeds a threshold set at a difference level below a best digital cell in the active set, the size of the difference level depending on whether the new digital cell belongs to any group to which no member of the active set belongs.

24. (Currently Amended) A method of controlling a mobile cellular telecommunications network using macro-diversity,

wherein a mobile station can establish a plurality of simultaneous radio links with digital cells in the network, the digital cells with which the mobile station has established radio links being defined as an active set, and

wherein the digital cells of the network are considered in groups,

the method comprising determining whether to establish a new radio link between a mobile station and a new digital cell, by determining whether a quality value of the new radio link exceeds a threshold set at a difference level below a best digital cell in the active set, the size of the difference level depending on whether the new digital cell belongs to any group to which no member of the active set belongs.

25. (Currently Amended) A method for performing a handover in a mobile telecommunications network, the method comprising:

allocating a plurality of network digital cells into a plurality of groups;

providing a mobile station adapted to establish a plurality of simultaneous radio connections with the plurality of network digital cells;

establishing an active set of digital cells for the mobile station wherein the active set of digital cells establish radio connections with the mobile station and wherein at least one digital cell in the active set is a member of a first group of the plurality of groups; and

determining if a candidate digital cell should be added to the active set of digital cells, wherein the determining comprises:

determining if the candidate digital cell is a member of the first group;

if the candidate digital cell is a member of the first group, then applying a first threshold standard to determine if the candidate digital cell should be added to the active set;

if the candidate digital cell is not a member of the first group, then applying a second threshold standard to determine if the candidate digital cell should be added to the active set.